

## CLAIMS:

1. Apparatus for writing an optical record carrier (10), comprising
  - a write unit (20) for generating physically detectable patterns at the record carrier in response to a write signal (Sw) which is modulated between at least a first and a second signal level, the write unit (20) comprising a write head (21) with a radiation source (22) and an optical system (23) for projecting a scanning spot (24) at the record carrier (10),
  - 5 the write unit (20) comprising a first detector (25) for generating a first detection signal (Sd1) which is indicative for an intensity of the radiation source (22), and a second detector (26) for generating a second detection signal (Sd2) which is indicative for an amount of radiation reflected by the record carrier (10), the write unit (20) comprising a supply circuit (27) for
  - 10 modulating the intensity of the radiation source (22) between at least a first and a second value in response to the write signal (Sw),
  - a control circuit (30) for setting the first and the second value,
  - displacement means (40, 41) for causing a relative displacement between the scanning spot (24) and the record carrier (10),
  - 15 characterized in that
  - the control circuit (30) comprises a first feedback loop (25, 31, 32, 33) for generating a first control signal (Sc1), which feedback loop includes the first detector (25), the control circuit (30) comprises a second feedback loop (25, 35, 36) for generating the second control signal (Sc2), the second feedback loop including the second detector (25), and a unit (35) for
  - 20 generating a ratio signal (Sr) which is representative for the ratio between the amount of reflected radiation when the write signal assumes the first signal level and when it assumes the second signal level, the control circuit (30) further comprising a signal combination unit (36) for generating the second control signal (Sc2), this signal being indicative for the product of the ratio signal (Sr) and the first control signal (Sc1).
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2. Apparatus according to claim 1, characterized in that the first feedback loop comprises a sample and hold unit (311) for sampling the first detection signal (Sd1), the sample and hold unit (311) being coupled to a sample signal generator (312) which generates a sample signal at a moment that a portion of the record carrier is to be erased.

3. Apparatus according to claim 1 or 2, characterized in that the unit (35) for generating a ratio signal (Sr) comprises a sample and hold unit (351) for sampling the second detection signal (Sd2) and generating a first auxiliary signal (S1), the sample and hold unit  
5 (351) being coupled to a sample signal generator (312) which generates a sample signal at a moment that a portion of the record carrier is to be erased, the unit (35) further comprising a peak detector (352) for generating a second auxiliary signal (S2), the peak detector (352) and the sample and hold unit (351) being coupled to a signal combination device (353) for generating the ratio signal (Sr) from the first (S1) and the second auxiliary signal (S2).

10 4. Apparatus according to one of the claims 1 to 3, characterized in that the second detector (26) comprises a plurality of detection elements (26a, 26b, 26c, 26d).

15 5. Apparatus according to claim 4, characterized in that the detection elements (26a, 26b, 26c, 26d) are coupled via variable gain input amplifiers (A1a) to a first and a second common amplifier (Ac1 and Ac2 resp.), the apparatus having a read mode and a write mode, wherein, in the write mode the variable gain amplifiers (A1a) have a relatively low amplification and the first common amplifier (Ac1) provides the second detection signal (Sd2), and wherein, in the read mode the variable gain amplifiers (A1a) have a relatively high  
20 amplification and the second common amplifier (Ac2) provides a read signal (Sw).

6. Apparatus according to claim 5, characterized in that the variable gain amplifiers (A1a) are also coupled to third amplifiers (A3), which provide servo signals for radial and axial control of the scanning spot (24).